



Name :

Roll No. :

Invigilator's Signature :

**CS/B.OPTM/SEM-4/BO-402/2013
2013**

**OPHTHALMIC & OPTICAL INSTRUMENTATION &
PROCEDURE - II**

Time Allotted : 3 Hours

Full Marks : 70

The figures in the margin indicate full marks.

*Candidates are required to give their answers in their own words
as far as practicable.*

GROUP - A

(Multiple Choice Type Questions)

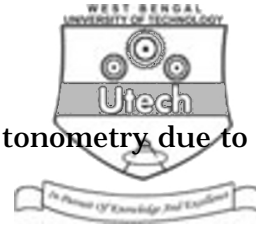
1. Choose the correct alternatives for the following :

10 × 1 = 10

- i) Applanation tonometry is based on
- | | |
|-----------------|---------------------|
| a) Pascal's Law | b) Imbert-Ficks Law |
| c) Hering's Law | d) None of these. |
- ii) Absence of green sensitivity of retina is called
- | | |
|-----------------|-------------------|
| a) Deuteranopia | b) Protanopia |
| c) Tritanopia | d) none of these. |

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[Turn over



- iii) Errors may occur during applanation tonometry due to
- a) irregular Cornea
 - b) excess fluorescein
 - c) faulty calibration of instrument
 - d) scleral rigidity.
- iv) In Humphrey autoperimetry the unit of illumination is
- a) apostilbs
 - b) candles
 - c) decibels
 - d) lumen.
- v) All are true of Schiottz tonometry *except*
- a) indentation of cornea
 - b) normogram necessary
 - c) topical anaesthesia needed
 - d) more reliable than applanation tonometry.
- vi) Eximer laser is used for
- a) PRK
 - b) Capsultomy
 - c) Retinal photocoagulation
 - d) all of these
 - e) none of these.



- vii) Hyperfluorescence of FFA occurs in
- leakage from blood vessels
 - loss of pigment
 - fluid accumulation
 - all of these
 - none of these.
- viii) B-scan is used to diagnose
- axial length
 - retinal detachment
 - proptosis
 - all of these.
- ix) Ophthalmic ultrasound uses a frequency of
- 20 kHz
 - 100 kHz
 - 50 kHz
 - 30 kHz.
- x) Laser has the following properties *except*
- it is monochromatic
 - collimated
 - non-polarised
 - coherent.

GROUP - B

(Short Answer Type Questions)

Write short notes on any *three* of the following.

$$3 \times 5 = 15$$

- Yag laser use in ophthalmology.
- 'Superior arcuate defect' found during perimetry in a glaucoma patient.



4. Use of A-scan in 10 L power calculation.
5. Reliability parameters in a Humphrey visual field report print-out.

GROUP - C

(Long Answer Type Questions)

Answer any *three* of the following. $3 \times 15 = 45$

6. a) Mention the types of contrast sensitivity in brief.
b) Explain the use of Arden gratings.
c) Discuss the neural mechanism of contrast sensitivity.
 $3 + 5 + 7$
7. a) Mention the differences between static perimetry and kinetic perimetry.
b) Draw and describe 3 important glaucomatous field defects commonly seen in an HVF report. $6 + 9$
8. a) Discuss 'Lasers in ophthalmology'.
b) Discuss the possible sources of 'error' in perimetry report. $10 + 5$
9. a) What is Pachymetry ? What are the important methods of Pachymetry ? Write in detail, about the importance of Pachymetry (CCT) in relation to glaucoma.
b) Write on the devices for colour vision testing.
 $(2 + 4 + 3) + 6$